



KING
COUNTY



City of Seattle



U.S. Environmental
Protection Agency

DENNY WAY

LAKE UNION

CSO Control Project

Issue No. 7
November
2001

This King County project will control CSOs to Lake Union and Elliott Bay, improving water quality and reducing the potential for adverse effects on human health and the environment.



Workers shotcreting the retrieval shaft for the Tunnel Boring Machine at 8th Avenue North and Roy Street.



Construction of the 120" diameter Denny Way CSO outfall at the Regulator in Myrtle Edwards Park.



A view of the mining operation looking back from the cutter head inside of the 14' 8" diameter Mercer Tunnel.

Eighteen Months Into Construction... *Look at where we are!*

Construction for the Denny Way/Lake Union Combined Sewer Overflow (CSO) Control Project has been in progress for a year and a half already. In those 18 months, King County contractors have:

- excavated and installed more than 2,700 feet of the 6,200 foot-long Mercer Street Tunnel under Queen Anne Hill;
- partially completed the East Portal for the tunnel at 8th Ave North and Roy Street where the Tunnel Boring Machine (TBM) will be removed from underground;
- begun construction of the new marine outfall, the outfall extension, and the on-shore transition structure in Myrtle Edwards Park; and
- started work on the pipelines in Elliott Bay and Myrtle Edwards Parks that will be used to transfer flows from the collection system to the tunnel and to discharge the treated CSO flows to the new outfall.

In addition, design and construction planning continues on the CSO Control Facility and pipelines and regulators to be installed in South Lake Union. Look for construction work to begin on those two parts of the project in 2002.

The Denny Way Project is a joint effort between King County Department of Natural Resources and the City of Seattle (Seattle Public Utilities) to control combined sewer overflows (CSOs) into Lake Union and Elliott Bay. CSOs are discharges of combined sanitary sewage and stormwater that are released into water bodies during storms. Five construction contracts are needed to implement the project, and construction will take place over a four-year period. Construction activities will occur in three areas of the city - 545 Elliott Avenue West, Myrtle Edwards and Elliott Bay Parks on the waterfront, and South Lake Union.

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More Construction will Affect Myrtle Edwards and Elliott Bay Parks in Next 2 Years

Beginning in November 2001, park users at Myrtle Edwards and Elliott Bay Parks will be affected by increased construction activity as work gets underway on the Elliott West Pipelines Contract. The construction area will extend from the south park entrance (at Pier 70) north to the general vicinity of the Port of Seattle grain terminal.

Open trench construction will be used to install two new pipelines. The 84" diameter CSO pipeline will convey flows from the existing Lake Union Tunnel to the Elliott West CSO Control Facility, and the 96" diameter effluent pipeline will convey treated flows from the CSO Control Facility to the outfall. In addition, several underground regulating and diversion structures will be built to connect the new pipelines to the existing sewer system.

Construction office trailers will be located in the Pier 70 parking lot. At the south entrance to the park there will be separate entrances for construction traffic and park users.

In order to accommodate construction of the large-diameter pipes and the haul road needed for construction access, the bike path corridor will be fenced off and closed to park visitors. The haul route between the Pier

70 parking lot and the Denny Regulator, installed in May 2001 for construction of the Marine Outfalls portion of the project, will be extended north of the regulator. The combined haul route and construction areas will extend up to 70 feet westward from the fence that separates the park and the railroad tracks.

Beginning in November, the contractor will remove pathways, trees, lawns, and shrubs in the work areas, and re-grade the construction corridor. All areas disturbed by construction will be re-planted and reopened for public use when construction is completed. The bike path corridor north of the Denny Regulator will be restored with new landscaping in late 2002. The area surrounding the Denny Regulator and the bike path between the regulator and the park entrance will be restored later in the contract, and will be re-opened to the public in mid-2004.

The rebuilt bike path will be wider and smoother than the old one, and drainage problems will be addressed by a new system, which should eliminate standing water problems that occur on the existing pathway. In Elliott Bay Park, the pathway curves will be smoothed out to make the path easier for recreational and commuting bicyclists to navigate.

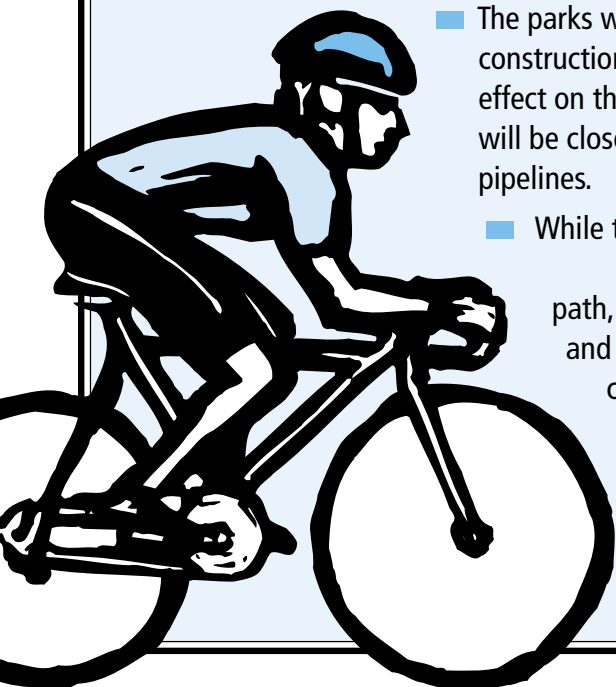
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How this affects park users:

- The parks will remain open for use during construction; however, there will be detours in effect on the bike path and parts of each park will be closed off to allow construction of the pipelines.
- While the bike path is closed, bikes and pedestrians will share the shoreside path, which will be marked with detour and warning signs. As necessary during construction, traffic flaggers will direct pedestrians and bicyclists.
- Some parking spaces will be lost in the Pier 70 parking lot.

How this affects neighbors of the parks:

- Neighbors may notice noise, dust, vibrations, and increased truck traffic.
- The level of impacts will vary throughout the 2 1/2 years of construction.
- Work hours are anticipated to be 10-12 hour days, Monday through Friday. However, they will vary according to the seasons and tasks being performed.



Seattle Parks and Recreation closely reviewed King County’s plans for landscape restoration, reconstruction of the bike path, public art, and other amenities that will affect the park in the future. In addition, King County worked closely with both Port of Seattle and Parks and Recreation staff to ensure that the construction activities

within the park could occur in a manner that minimizes impacts and disruptions for park visitors and that special events can continue to be accommodated in the park during the time that construction is underway.

Additional CSO Work to Start in South Lake Union Next Spring

In early 2002, King County will begin construction on the South Lake Union Pipelines portion of the Denny Way Project. Using a combination of trenchless and open trench construction methods, large pipelines will be installed underground at the following locations:

- Valley Street right-of-way from Fairview Avenue North to Westlake Avenue North;
- Broad Street and Roy Street between the Westlake/Valley intersection and Dexter;
- Eighth Avenue North between Republican Street and Roy Street; and
- Roy Street between a new regulating structure in Dexter Avenue North and the tunnel portal.

- coordinate as necessary with other construction projects in the neighborhood
- require our contractors to implement practices that decrease impacts to the neighborhood and adhere to all city regulations for noise and traffic control

South Lake Union Pipelines Preliminary Schedule

Winter 2002	Community Kick-off Meeting
Spring 2002	Construction Begins
Summer 2003	Construction Completed

In addition, below-ground regulating structures will be built in Dexter Avenue North at Roy Street and at the intersection of Eighth Avenue North and Republican Street.

The Denny Way project team knows that living near a construction project is difficult. We intend to be a good neighbor and work closely with the South Lake Union community to ensure that construction impacts are minimized. For starters, for the 18 months of construction we will:

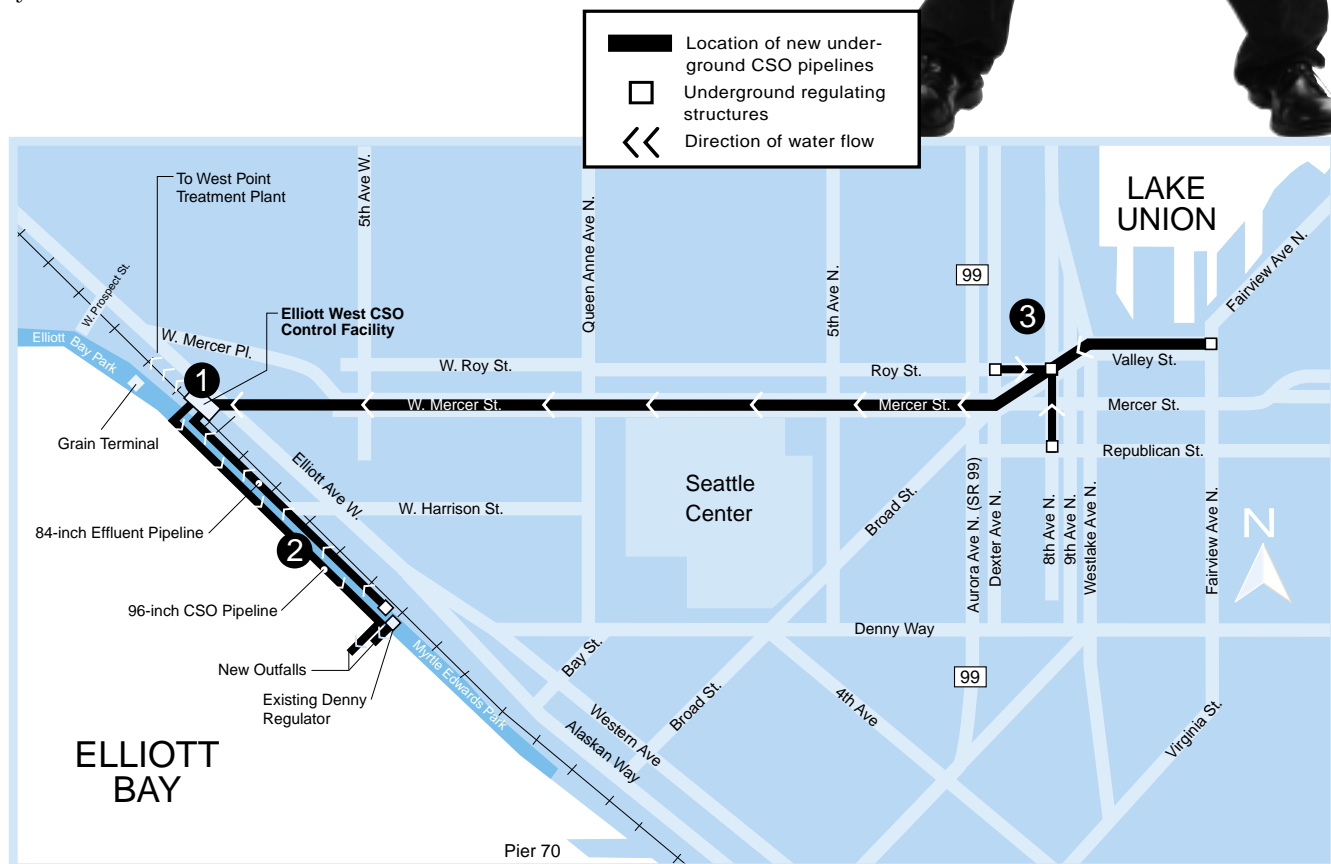
- communicate regularly with you
- promptly respond to your questions, issues, and problems
- ensure that access is maintained to all businesses and residences
- work as efficiently as possible to minimize the amount of time you are inconvenienced

What? *When?* and *Where?*

	Affected Area	The 6 month look-ahead	Complete Construction Schedule
1	545 Elliott Avenue West	<ul style="list-style-type: none"> • Mercer Tunnel mining continues 	Summer 2000–Summer 2004 <small>(Tunnel completed 2002; Control Facility completed 2004)</small>
2	Myrtle Edwards and Elliott Bay Parks	<ul style="list-style-type: none"> • Outfall construction continues; will be complete Winter 2002 • Elliott West Pipelines construction begins; bike path detours; vegetation removed; fencing and haul roads installed; excavation and pipe laying underway 	Summer 2001–Summer 2004
3	South Lake Union Area: <ul style="list-style-type: none"> • 8th Ave. N. and Roy Street intersection • Valley Street from Fairview Avenue N. to Westlake Avenue N. • Under Broad and Roy Streets between the Westlake/Valley intersection and Dexter Avenue N. • Roy Street between 8th Avenue N. and Dexter Avenue N. 	<ul style="list-style-type: none"> • Construction of East Portal continues; TBM will be removed when tunneling is complete in 2002 • Contractor mobilization for future tunnel and open-cut construction • Detours at Roy Street continue; additional detours established as necessary 	Spring 2002–Summer 2003

Coordinating Construction with SEATRAN

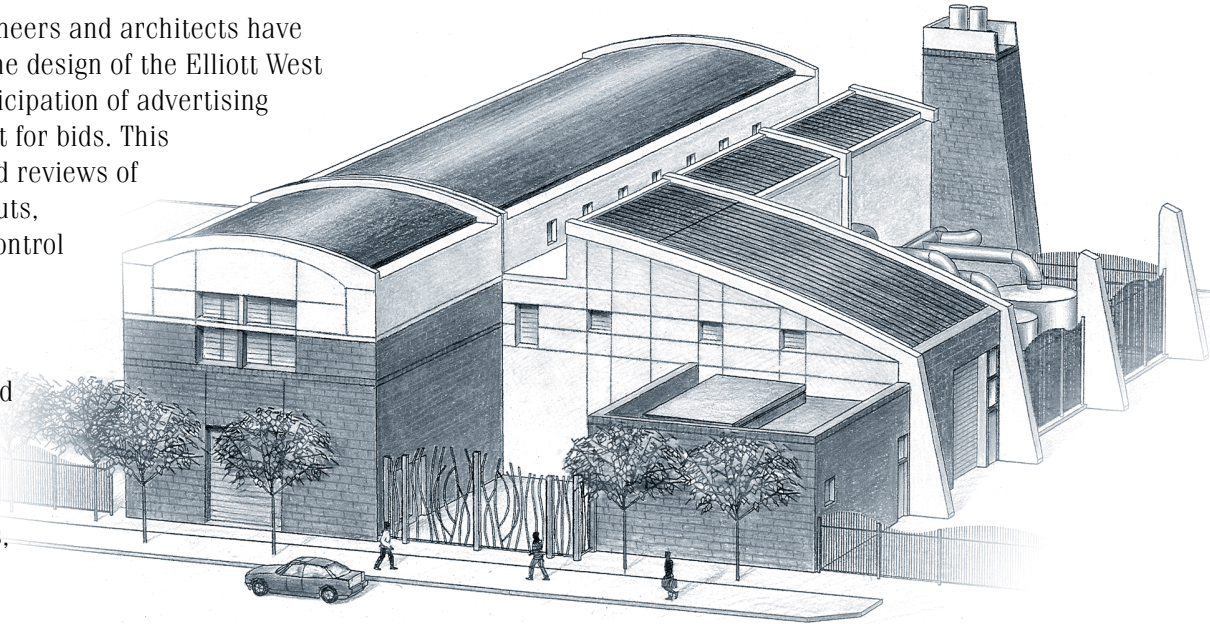
Traffic is a sensitive subject in Seattle; getting from here to there in a city riddled with construction projects makes the frustration even worse. In designing and planning construction on the Denny Way Project, King County works closely with SEATRAN to ensure that all City of Seattle traffic regulations are followed. All impacts to traffic and roadways including haul routes, hours of hauling, lane closures, flaggers, street cleaning, on-street parking impacts, and signage are determined and regulated by SEATRAN. Communication is ongoing throughout construction – both formally through permit processes and informally through regular meetings and conversations. The Denny Way team and SEATRAN will continue to work in close coordination over all the years of construction.



CSO Control Facility Design Finalized

In recent months, engineers and architects have worked on finalizing the design of the Elliott West Control Facility in anticipation of advertising the construction contract for bids. This process included detailed reviews of process equipment, layouts, and the proposed odor control system for the facility.

The final design of the building has been revised from conceptual designs presented earlier in the design process at public meetings, in newsletters, and for review by the Seattle Design Commission. The reason behind the design revisions is a change in the odor control system that will be installed in the new facility. Earlier designs incorporated a new odor control technology that appeared to be well-suited to the pump station conditions. However, observations of this technology in other similar locations showed that it is not effective in removing organic pollutants that typically cause odor problems in this type of facility. As a result, the designers decided to revise the design to incorporate deep-bed carbon odor scrubbers, which are known to be effective in this kind of installation. However, the maintenance requirements for these units are different, requiring an open area in the building footprint to allow access for maintenance workers to replace the carbon in the odor control equipment from above.



A view of the CSO Control Facility as seen from West Olympic Place above Kinnear Park on Queen Anne Hill.

From viewpoints above the building, the open area may be partially visible, as shown in the picture above. From street level the open roof area will largely be hidden from view by the front part of the building, which is unchanged from the previous design.

By providing an open area for the odor control equipment, maintenance workers will be able to inspect and replace the odor control materials as necessary in order to ensure effectiveness of the odor control system. The construction contract for the facility is expected to be awarded in early 2002, with construction beginning in the summer of 2002.

King County will construct more than 20 CSO control projects during the next 30 years. These projects have been prioritized to protect public health, beginning with the construction of CSO control projects along Puget Sound beaches (2010-2011) and the east end of the Lake Washington Ship Canal (2015).

Watch for the South Lake Union Pipelines Kick-off Meeting in Early 2002

The King County project team looks forward to the opportunity to meet with the South Lake Union community to discuss the project, construction plans, and how we can best work together during construction.

**Who can I contact with...
Questions? Comments?
A problem with construction?**

Community Liaison

Yvonne Kraus
Norton-Arnold & Company
206/269-0229 ext: 12

Internet Address:

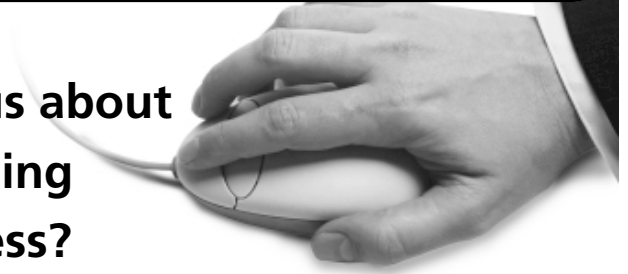
<http://dnr.metrokc.gov/wtd/dennyway/>

E-mail: yvonne@na-company.com

Hotline number: 206/205-1460.

*Use this number 24 hour a day to
report complaints related to construc-
tion activity.*

**Curious about
tunneling
progress?**



*The Denny Way CSO web site includes a graphic depicting the
tunnel boring machine location, updated each week until
tunneling is completed in Spring 2002.*

King County's Wastewater Treatment Division has a number of projects and programs underway that may be of interest to you—from habitat conservation and restoration to site selection for a third wastewater treatment facility. If you are curious about these projects and would like more information, please contact Denise Chanez at (206) 296-8286, or check out the King County DNR website at: <http://dnr.metrokc.gov/wtd/>.

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